



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,585	12/17/2003	Akira Nishijima	081909-0115	5747

22428 7590 04/19/2004

FOLEY AND LARDNER
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

FISHMAN, MARINA

ART UNIT	PAPER NUMBER
----------	--------------

2832

DATE MAILED: 04/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/736,585	NISHIJIMA ET AL.	
	Examiner	Art Unit	
	Marina Fishman	2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 22-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 22-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/238,901.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/17/2003</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

General Status

1. This is a First Action on the Merits. Claims 1 – 14 and 22 - 26 are pending in the case and are being examined.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10/238,901, filed on 09/11/2002.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 24 and 25 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claim 24, line 8 Applicant states " $(540/S2)^0 \leq \beta \leq (600/S2)^0$ " this recitation is inconsistent with the description of the specification (page 14 line 9). For the purpose of examination this recitation is interpreted in accordance with the specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2832

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5, 6, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Bern [US 4,532,391].

Bern discloses a contact for a vacuum interrupter [Figures 1 and 2] having:

- a contact plate [26,28];
- a contact carrier [6,8] with a first end face which is fitted with the contact plate , and a peripheral face which is formed with a slit portion in such a manner as to form a coil part, the coil part flowing a current such that a longitudinal magnetic field is formed in an axial direction of the contact carrier, the first end face fitted with the contact plate being formed with a circumferential slit portion which connects to the slit portion [Figure 1, Column 2, lines 26 – 33 and Column 3, lines 34 - 59].

Regarding Claims 2, 5 and 6, Bern disclose the contact plate [26, 28] with a substantially liner slit [32], that extends radially [Figure 2] and connects to the circumferential slit portion.

Regarding Claim 8, Bern discloses the contact carrier [6,8] with a second end face that is joined which with the contact plate [Figure 1].

Art Unit: 2832

5. Claims 1, 2, 5, 6, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Paul et al. [US 4,620,074].

Paul et al. disclose a contact arrangement for vacuum switches [Figures 1 and 2] having:

- a contact plate [26,28];
- a contact carrier [6,8] with a first end face which is fitted with the contact plate, and a peripheral face which is formed with a slit portion in such a manner as to form a coil part, the coil part flowing a current such that a longitudinal magnetic field is formed in an axial direction of the contact carrier, the first end face fitted with the contact plate being formed with a circumferential slit portion which connects to the slit portion [Figures 1 and 2, Abstract and Column 2, lines 40 – 50, Column 3, lines 29 – 60].

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, 10 - 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Bern [US 4,532,391] or Paul et al. [US 4,620,074] in view of Slamecka [US 6,072,141].

Art Unit: 2832

Regarding claims 3, 4, 10 - 14, both Bern and Paul et al. disclose the instant claimed invention except for specific ranges for diameter D and a length L of the contact plate, the number of slits S1, a tilt angle α , an azimuth angles β and γ , a distance G between two electrodes and a wall thickness W of the contact carrier.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the ranges for the diameter D and the length L of the contact plate, the number of the slits S1, the tilt angle α , the azimuth angles β and γ , the distance G between two electrodes and the wall thickness W of the contact carrier, since it has been held that where the general condition of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art [*In re Aller*, 105 USPQ 233].

Regarding claim 7, both Bern and Paul et al. disclose the instant claimed invention except for the slit in the contact pate is being offset from a line passing through a center of the contact plate. Slamecka discloses a vacuum interrupter having a contact plate with a slit that is offset from a line passing through a center of the contact plate [Figures 7, 9, 13]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have for the slit in the contact pate that is offset from a line passing through a center of the contact plate in Bern or Paul et al., as suggested by Slamecka, in order to dampen the eddy currents [Column 5, lines 1, 2].

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11

Art Unit: 2832

F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 22 – 26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9 – 11, 14, 15 of U.S. Patent No. 6,649,855. Although the conflicting claims are not identical, they are not patentably distinct from each other because limitations of claims 22 – 26 are substantially identical to claims 9 – 11, 14, 15 of U.S. Patent No. 6,649,855.

Conclusion


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Fishman whose telephone number is 571-272-1991. The examiner can normally be reached on 7-5 M-T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2832

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marina Fishman
April 6, 2004


LINCOLN DONOVAN
PRIMARY EXAMINER
GROUP 2100